

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An apparatus for the interstitial coagulation of tissue, comprising a first three-dimensional treatment electrode [[body]] that can be expanded to various states of expansion, and at least one electrode during use and is adapted to conduct an HF coagulation current into said tissue, the treatment electrode being formed forming at least a part of said three-dimensional body such that by one of continuous and stepwise expansion of said body said electrode it can be kept in constant electrical contact with the tissue during coagulation, wherein the treatment electrode comprises one of an elastically stretchable and an unfoldable surface element that defines a hydraulically separate interior space to which an internal pressure can be applied to expand said surface element and thereby said treatment electrode.
2. (Currently Amended) The apparatus according to claim 1, wherein a control device is provided for controlling the degree of expansion of the [[body]] treatment electrode dependent on said coagulation current.
3. (Currently Amended) The apparatus according to claim 2, wherein said control device is adapted to enable an adjustment of a current density of said coagulation current between said treatment electrode and said tissue.
4. (Previously Presented) The apparatus according to claim 3, wherein said control device permits the current density to be adjusted independently of the degree of expansion.
5. (Currently Amended) The apparatus according to claim 1, wherein measurement devices are provided for detecting the state of expansion of said three-dimensional [[body]] treatment electrode.
6. (Currently Amended) The apparatus according to claim 1, further including wherein said electrode comprises a treatment electrode that is at least partially permeable to liquid and that

~~can be brought into contact with a section of said tissue, and comprising a liquid-supply through which an electrically conductive liquid can be delivered to said surface element treatment electrode, and a current supply device adapted to deliver said HF coagulation current to said treatment electrode in such a way that said HF treatment current conducted to the liquid that is passing through the treatment electrode.~~

7. (Canceled)

8. (Currently Amended) The apparatus according to claim [[7]] 6, wherein said surface element is in the form of one of a ring and a sphere.

9. (Previously Presented) The apparatus according to claim 6, wherein said treatment electrode is constructed in the form of a balloon catheter.

10. (Currently Amended) The apparatus according to claim [[7]] 6, wherein said surface element interior space is adapted to be filled with said electrically conductive liquid.

11. (Previously Presented) The apparatus according to claim 6, wherein said electrically conductive liquid comprises one of polyvinyl pyrrolidone (PVP), a surfactant and a similar means of changing the viscosity of said electrically conductive liquid.

12. (Previously Presented) The apparatus according to claim 6, wherein said treatment electrode is made of a thermally stable material; the form of one of a film, a felt and a woven fabric.

13. (Currently Amended) The apparatus according to claim [[7]] 6, wherein said interior space is enclosed by an expandable auxiliary body that [[is]] hydraulically separated separates said surface element from said interior space electrically conductive liquid, and said surface element is constructed in several layers such that in an inner layer, electrically conductive liquid can be conducted in direction directed towards an outer surface of the element, and in an outer layer,

electrically conductive liquid can be conducted in a direction directed perpendicular to the outer surface of the element direction.

14. (Previously Presented) The apparatus according to claim 6, wherein a suction device is provided to suck away liquid.

15. (Previously Presented) The apparatus according to claim 1, wherein said electrode is adapted to be supplied with a cutting current.

16. (Previously Presented) The apparatus as claimed in claim 12, wherein said thermally stable material is comprised of tetrafluoroethylene.

17. (Previously Presented) The apparatus as claimed in claim 13, wherein a partition layer with a greater resistance to liquid flow than said inner layer is disposed between said inner layer and said outer layer.

18. (New) The apparatus according to claim 1, further including a second three-dimensional treatment electrode that can be expanded to various states of expansion during use and is adapted to conduct an HF coagulation current into said tissue by one of continuous and stepwise expansion.

19. (New) The apparatus according to claim 18, wherein interior spaces of said first and second treatment electrodes can be placed under pressure independently and expanded to different degrees.

20. (New) The apparatus of claim 18, wherein said first and second treatment electrodes are arranged co-axially along a central axis of said apparatus.